

WHAT IS CLAIMED IS:

1. A thin film transistor array panel comprising:
an insulating substrate;
a plurality of thin film transistors formed on the substrate;
5 a plurality of three primary color filters formed on the substrate;
a plurality of first pixel electrodes formed on the color filters and connected to
the thin film transistors; and
a plurality of second pixel electrodes formed on the substrate and connected
to the thin film transistors,
10 wherein the second pixel electrodes do not overlap the color filters.
2. The panel of claim 1, further comprising an organic insulating layer
including a plurality of first portions disposed between the color filters and the first
pixel electrodes and a plurality of second portions disposed under the second pixel
electrodes and having thickness larger than the first portions.
- 15 3. The panel of claim 2, further comprising an inorganic insulating layer
disposed between the color filters and the thin film transistors or between the organic
insulating layer and the thin film transistors.
4. The panel of claim 1, further comprising a plurality of transparent
filters disposed under the second pixel electrodes.
- 20 5. The panel of claim 4, wherein the transparent filters includes
transparent photosensitive material or acrylic material.
6. The panel of claim 5, further comprising an inorganic insulating layer
disposed between the color filters and the thin film transistors or between the
transparent filters and the thin film transistors.
- 25 7. The panel of claim 1, wherein the three primary colors include red,
green and blue, and the first pixel electrodes include third, fourth and fifth pixel
electrodes located under the red, green and blue color filters, respectively.
8. The panel of claim 7, wherein the first and the second pixel electrodes
are sequentially arranged in a direction.
- 30 9. The panel of claim 7, wherein the first and the second pixel electrodes
are arranged in a plurality of 2×3 matrices, each 2×3 matrix having a first row

including third, fifth and fourth pixel electrodes arranged in sequence and a second row including fourth, second and third pixel electrodes arranged in sequence.

10. The panel of claim 7, wherein the first and the second pixel electrodes are arranged in a plurality of 2×2 matrices, each 2×2 matrix having a first row including third and fourth pixel electrodes arranged in sequence and a second row including fifth and second pixel electrodes arranged in sequence.

11. A liquid crystal display comprising:
a first substrate;
a plurality of gate lines formed on the first substrate;
a gate insulating layer formed on the gate lines;
a semiconductor layer formed on the gate insulating layer;
an ohmic contact layer formed on the semiconductor layer;
a plurality of data lines formed on the gate insulating layer and intersecting the gate lines to define a plurality of pixel areas;
a first protective layer formed on the data lines;
a plurality of red, green and blue color filters formed on the first protective layer;
a second protective layer formed on the color filters;
a plurality of pixel electrodes formed on the second protective layer and electrically connected to the gate lines and the data lines through the semiconductor layer;
a second substrate facing the first substrate;
a common electrode formed on the first substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate,
wherein the pixel areas include a plurality of white pixel areas having no color filter.

12. The liquid crystal display of claim 11, wherein the liquid crystal layer has a vertical alignment with respect to the first and the second substrates.

13. The liquid crystal display of claim 12, further comprising a plurality of protrusions formed on the common electrode and made of organic material, wherein the pixel electrodes have cutouts.

14. The liquid crystal display of claim 11, wherein the liquid crystal layer has a twisted alignment.

15. The liquid crystal display of claim 11, wherein the second passivation layer includes a plurality of first portions disposed on the color filters and a plurality of second portions disposed on the white pixel areas and thicker than the first portions.

16. A liquid crystal display comprising:
a first substrate;
a plurality of gate lines formed on the first substrate;
a gate insulating layer formed on the gate lines;
a semiconductor layer formed on the gate insulating layer;
an ohmic contact layer formed on the semiconductor layer;
a plurality of data lines formed on the gate insulating layer and intersecting the gate lines to define a plurality of pixel areas;
a first protective layer formed on the data lines;
a plurality of red, green, blue and transparent color filters formed on the first protective layer;
a second protective layer formed on the color filters;
a plurality of pixel electrodes formed on the second protective layer and electrically connected to the gate lines and the data lines through the semiconductor layer;
a second substrate facing the first substrate;
a common electrode formed on the second substrate; and
a liquid crystal layer interposed between the first substrate and the second substrate.

17. The liquid crystal display of claim 16, wherein the liquid crystal layer has a vertical alignment with respect to the first and the second substrates.

18. The liquid crystal display of claim 17, further comprising a plurality of protrusions formed on the common electrode and made of organic material, wherein the pixel electrodes have cutouts.

19. The liquid crystal display of claim 16, wherein the liquid crystal layer has a twisted alignment.

20. The liquid crystal display of claim 16, further comprising a black matrix disposed on the first substrate and defining the pixel areas.